

App. No. 10/777,667
Amdt. Dated September 6, 2005
Reply to Office Action of June 3, 2005
Atty. Dkt. No. 8590-101

AMENDMENTS TO THE CLAIMS:

This listing of Claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of processing vegetables having bulbs including root crowns comprising:

securing a top portion of each of the vegetables;

moving the secured vegetables in a generally vertical disposition into engagement with a pair of like sized reversely rotating members;

driving the rotating members sufficiently to apply applying an abrupt jarring force to a bottom portion of each of the vegetables acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to separate the roots rip apart a root crown to separate a bottom portion only of the root crown or portions thereof at or near each root crown from the remaining portion of each vegetable upon engaging the rotating members; and

packaging the vegetables in a container.

2. (Previously Amended) A method according to claim 1, wherein said applying force includes applying force to the bottom portion of each one of the vegetables below the intersection of the root crown and the bulb in the opposite direction to the top portion of the vegetable to separate rip apart the root crown from the bottom portion from of the vegetable at the root crown.
3. (Original) A method according to claim 1, further including discarding the separated portions of the vegetables.

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4. (Cancelled) A method according to claim 1, wherein said applying force to the bottom portion includes moving the bottom portion of the vegetables into engagement with at least one pair of rotating members.
5. (Original) A method according to claim 4, further including discarding the separated portions of the vegetables.
6. (Original) A method according to claim 1, further including singulating a group of the vegetables prior to the applying of force.
7. (Original) A method according to claim 6, further including washing the singulated vegetables.
8. (Original) A method according to claim 7, further including peeling the foreskins from the singulated vegetables.
9. (Original) A method according to claim 8, further including supporting the singulated vegetable vertically by its stalk.
10. (Original) A method according to claim 9, further including translating the vegetables along a path of travel.
11. (Original) A method according to claim 1, further including translating the vegetables substantially vertically along a path of travel into engagement with a de-rooter to apply force to the bottom portion of the vegetable.
12. (Original) A method according to claim 11, further including translating the vegetables to a second de-rooter to repeat the applying of force to the bottom portion of the vegetables.
13. (Previously Amended) A method according to claim 11, wherein the applying of force is caused by holding the top portion of the vegetable while the de-rooter applies force to the bottom portion of the vegetable.

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14. (Original) A method according to claim 13, further including washing the vegetables after separating the bottom portion therefrom.
15. (Original) A method according to claim 14, further including grouping the vegetables.
16. (Cancelled) A method according to claim 11, wherein the de-rooter includes a pair of members rotating in opposite directions.
17. (Original) A method according to claim 16, wherein the rotating members include a pair of pinch rollers.
18. (Original) A method according to claim 16, wherein the rotating members include a pair of meshing gears.
19. (Cancelled) A method according to claim 11, wherein the de-rooter includes a moveable clamp.
20. (Withdrawn) A system for processing vegetables having bulbs including root crowns comprising:
 - a clamp for applying force at the top portion of the vegetable; and
 - a de-rooter for applying force to the bottom portion of each one of the vegetables below the intersection of the root crown and the bulb in opposition to force applied by the clamp to separate the bottom portion from the vegetable at or near the root crown.
21. (Withdrawn) A system according to claim 20, wherein the de-rooter is a pair of rotating members.
22. (Withdrawn) A system according to claim 21, wherein the rotating members are pinch rollers.
23. (Withdrawn) A system according to claim 21, wherein the rotating members are

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meshing gears.

24. (Withdrawn) A de-rooter according to claim 20, wherein the de-rooter is a moveable clamp.

25. (Currently Amended) A method according to claim 1, further including subsequently repeating the applying the abrupt jarring force acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to help ensure the separation ripping apart of the roots root crowns or portions thereof at or near each root crown from the remaining portion of each vegetable.

26. (Currently Amended) A method according to claim 1, wherein the driving the rotating members sufficiently to apply applying the abrupt jarring force includes holding the vegetables individually by the top portions thereof, moving them seriatim to a de-rooting station, and applying the abrupt jarring force to the bottom portion of each vegetable in the direction opposite to the top portion of each vegetable upon engaging the rotating members.

27. (Currently Amended) A method of processing vegetables having bulbs including root crowns comprising:

moving the secured vegetables in a generally vertical disposition into engagement with a pair of like sized reversely rotating members;

driving the rotating members sufficiently to apply applying an abrupt jarring force to a bottom portion of each of the vegetables acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to separate the roots rip apart a root crown to separate a bottom portion only of the root crown or portions thereof only at or near each root crown from the remaining portion of each vegetable upon engaging the rotating members.

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28. (New) A method of processing vegetables having bulbs including root crowns comprising:

securing a top portion of each of the vegetables;

moving the secured vegetables in a generally vertical disposition;

engaging the secured vegetables with a vertically movable clamp;

driving the clamp sufficiently to apply an abrupt jarring force using the vertically movable clamp to a bottom portion of each of the vegetables acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to rip apart a root crown to separate a bottom portion only of the root crown from the remaining portion of each vegetable; and

packaging the vegetables in a container,

wherein the vegetables are secured by the top portion at the time of applying the abrupt jarring force in a downward direction, the vegetables are transported to the clamp in a direction generally perpendicular to a path of travel of the clamp.

29. (New) A method of processing vegetables having bulbs including root crowns comprising:

securing a top portion of each of the vegetables;

moving the secured vegetables in a generally vertical disposition into engagement with a pair of like sized reversely rotating members;

driving the rotating members sufficiently to apply an abrupt jarring force to a bottom portion of each of the vegetables acting substantially in the direction opposite the top portion and in line between the top and bottom portions of each one of the vegetables to rip apart a root crown to separate a bottom portion only of the root crown

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from the remaining portion of each vegetable as soon upon engaging the rotating members;

wherein the vegetables are secured by the top portion at the time of applying the abrupt jarring force, the vegetables are transported to the rotating members in a direction generally perpendicular to an axis of each of the rotating members.